

Family list

1 application(s) for: JP11308065 (A)



**METHOD AND DEVICE FOR ADJUSTING FREQUENCY OF
CRYSTAL RESONATOR**

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Applicant: SEIKO EPSON CORP

EC:

IPC: H01L21/302; H03H3/04; H01L21/02; (+3)

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Inventor(s): MIYAJIMA HIROO; ASUKE SHINTARO; YAMAZAKI TADASHI +

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Classification:

- international: H01L21/302; H03H3/04; H01L21/02; H03H3/00; (IPC1-7): H03H3/04; H01L21/302

- european:

Application number: JP19980113942 19980423

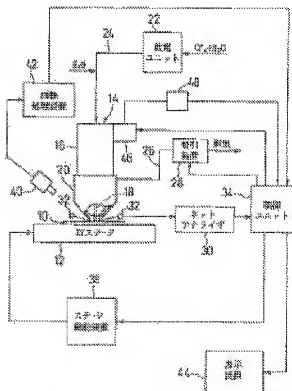
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JP3726488 (B2)

Abstract of JP 11308065 (A)

PROBLEM TO BE SOLVED: To easily adjust frequency in atmospheric pressure. **SOLUTION:** In a crystal wafer 10, a 1st resonator chip is arranged at a working position by an XY stage 12. An image processor 42 inputs to a control unit 34 that the chip is set to the working position from an image-pickup image of a positioning camera 40. A processing unit 14 makes a jetting nozzle 18 spray reaction gas from a discharging unit 22 to the wafer 10, an absorption nozzle 20 absorbs jetted reaction gas and locally etches the crystal wafer. The unit 34 controls the position of the unit 14 via a drive mechanism 46, based on a detection signal of a position sensor 48, makes the unit 14 move and etch crystal, stops the etching of the wafer 10 when an oscillation frequency detected by a net analyzer 30 becomes a reference value, feeds the stage 12 by a prescribed pitch and sets the next chip to the working position.



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(54) 【発明の名称】 水晶振動子の周波数調整方法および装置

